

IN THE CLAIMS

Claim 1 (currently amended): A melt-blended polyethylene composition comprising a melt blend of:

a first high density polyethylene resin having a melt flow index of about 0.01 to about 0.2 and a density of about 0.941 to about 0.958 g/cm³;

a second high density polyethylene resin having a melt flow index of about 0.1 to about 1.5 and a density of about 0.957 to about 0.970 g/cm³; and

a third polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof,

said resins being present in the melt-blended polyethylene composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 2 (previously presented): The composition of claim 1, wherein the first, second and third resins are each independently selected from the group consisting of virgin, recycled, scrap and wide specification resins, and mixtures thereof.

Claim 3 (previously presented): The composition of claim 1, wherein the third polyethylene resin has a melt flow index of about 0.1 to about 1.5.

Claim 4 (previously presented): The composition of claim 1, wherein the third polyethylene resin has a density of about 0.920 to about 0.940.

Claim 5 (cancelled)

Claim 6 (previously presented): The composition of claim 1, wherein the first and second high density polyethylene resins are each independently selected from the group consisting of a unimodal resin, a bimodal resin, a multimodal resin, and mixtures thereof.

Claim 7 (previously presented): The composition of claim 1, wherein the first and second high density polyethylene resins are present in a total amount of about 50 to about 95 percent by weight.

Claim 8 (original): The composition of claim 1, wherein the flow rate ratio of the melt-blended composition is about 80 to about 130.

Claim 9 (previously presented): The composition of claim 1, wherein the flow rate ratio of the first and second resins is about 20 to about 200.

Claim 10 (previously presented): The composition of claim 9, wherein the flow rate ratio of the first and second resins is about 90 to about 130.

Claim 11 (original): The composition of claim 1, wherein the flow rate ratio of the linear low density polyethylene and the linear medium density polyethylene is about 20 to about 60.

Claim 12 (original): The composition of claim 1, wherein the melt flow index of the melt-blended composition is about 0.15 to about 0.35.

Claim 13 (original): The composition of claim 12, wherein the melt flow index of the melt-blended composition is about 0.2 to about 0.3.

Claim 14 (original): The composition of claim 1, wherein the density of the melt-blended composition is 0.945 to 0.955 and the melt flow index is about 0.1 to 0.4.

Claim 15 (previously presented): The composition of claim 1, wherein the first and second high density polyethylene resins are each independently selected from the group consisting of a high molecular weight high density polyethylene resin, a homopolymer high density polyethylene resin, and mixtures thereof.

16-19 (cancelled)

Claim 20 (currently amended): A melt-blended polyethylene composition comprising a melt blend of:

a high molecular weight high density polyethylene resin having a density of about 0.941 to about 0.958 g/cm³ and a melt flow index of about 0.01 to about 0.2;

a homopolymer high density polyethylene resin having a density of about 0.957 to about 0.970 g/cm³ and a melt flow index of about 0.1 to about 1.5; and

at least one additional polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof,

said resins being present in the melt-blended polyethylene composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 21 (previously presented): The composition of claim 20, wherein the high molecular weight high density polyethylene resins and homopolymer high density polyethylene resins ~~is~~ are present in a total amount of about 50 to about 95 percent by weight.

Claim 22 (previously presented): The composition of claim 20, wherein each of the resins are independently selected from the group consisting of virgin, recycled, scrap and wide specification resins, and mixtures thereof.

Claim 23 (currently amended): A plastic article comprising a melt blended polyethylene composition that comprises ~~a melt blend of:~~

a first high density polyethylene resin having a melt flow index of about 0.01 to about 0.2 and a density of about 0.941 to about 0.958 g/cm³;

a second high density polyethylene resin having a melt flow index of about 0.1 to about 1.5 and a density of about 0.957 to about 0.970 g/cm³; and

a third polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof,

said resins being present in the melt-blended polyethylene composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 24 (withdrawn): The article of claim 23, wherein the article is selected from the group consisting of pipe, pipe fittings, wire insulation material, cable insulation materials, films, sheets, and environmental chambers.

Claim 25 (previously presented): The article of claim 23, wherein the first, second and third resins are each independently selected from the group consisting of virgin, scrap, recycled, and wide specification resins, and mixtures thereof.

Claim 26 (previously presented): A plastic article comprising a melt blended polyethylene composition that comprises:

a high molecular weight high density polyethylene resin having a density of about 0.941 to about 0.958 g/cm³ and a melt flow index of about 0.01 to about 0.2;

a homopolymer high density polyethylene resin having a density of about 0.957 to about 0.970 g/cm³ and a melt flow index of about 0.1 to about 1.5; and

at least one additional polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof,

said polyethylene resins being present in the melt-blended polyethylene composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 27 (withdrawn): The article of claim 26, wherein the article is selected from the group consisting of pipe, pipe fittings, wire insulation material, cable insulation materials, films, sheets, and environmental chambers.

Claim 28 (previously presented): The article of claim 26, wherein the first, second and third resins are each independently selected from the group consisting of virgin, scrap, recycled, and wide specification resins, and mixtures thereof.

Claim 29 (withdrawn): An extruded, molded or formed pipe and/or pipe fitting comprising a melt blended polyethylene composition that comprises a melt blend of a high density polyethylene resin and at least one resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof, said resins

being present in the melt-blended polyethylene composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 30 (withdrawn): The pipe and/or pipe fitting of claim 29, wherein the resins are independently selected from the group consisting of virgin, scrap, recycled, and wide specification resins, and mixtures thereof.

Claim 31 (withdrawn): The pipe and/or pipe fitting of claim 29, wherein the composition further comprises about 1 to about 5 percent by weight carbon black.

Claim 32 (withdrawn): The pipe and/or pipe fitting of claim 29, wherein the pipe is selected from the group consisting of profile pipe, corrugated pipe, and combinations thereof.

Claim 33 (withdrawn): The pipe and/or pipe fitting of claim 29, having a density of 0.945 to 0.955, a melt flow index of about 0.1 to 0.4, a minimum flexural modulus of 110,000 psi and a minimum tensile strength of 3,000 psi.

Claim 34 (withdrawn): The pipe and/or pipe fitting of claim 33, wherein the pipe is selected from the group consisting of profile pipe, corrugated pipe, and combinations thereof.

Claim 35 (withdrawn): An extruded, molded or formed pipe and/or pipe fitting comprising a melt blended polyethylene composition that comprises a high density polyethylene resin selected from the group consisting of a high molecular weight high density polyethylene resin having a density of about 0.941 to about 0.958 g/cm³ and a melt flow index of about 0.01 to about 0.2, a homopolymer high density polyethylene resin having a density of about 0.957 to about 0.970 g/cm³ and a melt flow index of about 0.1 to about 1.5, and mixtures thereof; and at least one additional polyethylene resin having a melt flow index of about 0.1 to about 1.5 and a density of about 0.920 to about 0.940 g/cm³, said polyethylene resins being present in the melt-blended composition in amounts relative to one another such that the composition has a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 36 (withdrawn): The pipe and/or pipe fitting of claim 35, wherein the resins are independently selected from the group consisting of virgin, scrap, recycled, and wide specification resins, and mixtures thereof.

Claim 37 (withdrawn): The pipe and/or pipe fitting of claim 35, wherein the composition further comprises about 1 to about 5 percent by weight carbon black.

Claim 38 (withdrawn): The pipe and/or pipe fitting of claim 35, wherein the pipe is selected from the group consisting of profile pipe, corrugated pipe, and combinations thereof.

Claim 39 (withdrawn): The pipe and/or pipe fitting of claim 35, having a density of 0.945 to 0.955, a melt flow index of about 0.1 to 0.4, a minimum flexural modulus of 110,000 psi and a minimum tensile strength of 3,000 psi.

Claim 40 (withdrawn): The pipe and/or pipe fitting of claim 39, wherein the pipe is selected from the group consisting of profile pipe, corrugated pipe, and combinations thereof.

Claim 41 (previously presented): A method for producing a polyethylene composition, comprising melt blending together a sufficient amount of a first high density polyethylene resin having a melt flow index of about 0.01 to about 0.2 and a density of about 0.941 to about 0.958 g/cm³; a second high density polyethylene resin having a melt flow index of about 0.1 to about 1.5 and a density of about 0.957 to about 0.970 g/cm³; and a sufficient amount of a third polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof, to produce a melt-blended composition having a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 42 (previously presented): The method of claim 41, wherein the first, second and third resins are each independently selected from the group consisting of virgin, recycled, scrap and wide specification resins, and mixtures thereof.

Claim 43 (previously presented): The composition of claim 41, wherein the first and second high density polyethylene resins are present in a total amount of about 50 to about 95 percent by weight.

Claim 44 (previously presented): A method for producing a polyethylene composition, comprising melt blending together a sufficient amount of a high molecular weight high density polyethylene resin having a density of about 0.941 to about 0.958 g/cm³ and a melt flow index of about 0.01 to about 0.2; a homopolymer high density polyethylene resin having a density of about 0.957 to about 0.970 g/cm³ and a melt flow index of about 0.1 to about 1.5; and a sufficient amount of at least one additional polyethylene resin selected from the group consisting of linear low density polyethylene resins, linear medium density polyethylene resins, and mixtures thereof, to produce a melt-blended composition having a density of about 0.945 to about 0.960 g/cm³, a melt flow index of about 0.1 to about 0.4, and a stress crack resistance of at least 24 hours.

Claim 45 (previously presented): The method of claim 44, wherein each of the resins is independently selected from the group consisting of virgin, recycled, scrap and wide specification resins, and mixtures thereof.

Claim 46 (previously presented): The method of claim 44, wherein the high molecular weight high density polyethylene resin and homopolymer high density polyethylene resin are present in a total amount of about 50 to about 95 percent by weight.

Claim 47 (previously presented): The composition of claim 23, wherein the first and second high density polyethylene resins are present in an total amount of about 50 to about 95 percent by weight.

Claim 48 (previously presented): The composition of claim 23, wherein the first and second high density polyethylene resins are each independently selected from the group consisting of a high molecular weight high density polyethylene resin, a homopolymer high density polyethylene resin, and mixtures thereof.

Claim 49 (previously presented): The article of claim 26, wherein the high molecular weight high density polyethylene resin and homopolymer high density polyethylene resin are present in a total amount of about 50 to about 95 percent by weight.

Claim 50 (previously presented): The composition of claim 41, wherein the first and second high density polyethylene resins are each independently selected from the group consisting of a high molecular weight high density polyethylene resin, a homopolymer high density polyethylene resin, and mixtures thereof.